What is Claimed is:

1. A mobile communication system comprising:

a base station; and

a mobile station,

a radio channel being set between said base station and said mobile station, and a packet being transmitted from said base station to said mobile station by using the radio channel,

wherein said base station comprises

a base station transmitting/receiving section which sets the radio channel to said mobile station,

a base station state updating section which generates transmission/reception state update information that indicates update of a packet receivable state in said mobile station and notifies said mobile station of the transmission/reception state update information, and

a base station information storage section which continuously holds dedicated physical channel setting information in the radio channel in a suspend state, and

said mobile station comprises

a mobile station transmitting/receiving section which sets the radio channel to said base station,

a mobile station state updating section which

sets, on the basis of the transmission/reception state update information, one of an active state in which the packet can be received and the suspend state in which the packet cannot be received, and

a mobile station information storage section which continuously holds the dedicated physical channel setting information in the radio channel in the suspend state.

2. A system according to claim 1, wherein when said mobile station state updating section receives a change instruction to the active state, said mobile station transmitting/receiving section starts at least one of standing by for the packet and transmission/reception of dedicated physical channel data to be transmitted by a dedicated physical channel.

3. A system according to claim 2, wherein when said mobile station state updating section receives a change instruction to the suspend state, said mobile station transmitting/receiving section stops at least one of transmission of the dedicated physical channel data and reception of the dedicated physical channel data while continuously holding the setting information in the radio channel.

4. A system according to claim 2, wherein when

said base station is in the suspend state, said base station transmitting/receiving section stops at least one of transmission of dedicated physical channel data and reception of the dedicated physical channel data while continuously holding the setting information in the radio channel.

5. A system according to claim 1, wherein said mobile station state updating section sets the active state when the transmission/reception state update information cannot be normally received.

6. A system according to claim 1, wherein said mobile station further comprises a packet control signal generation section which, when a change instruction to the active state is normally received, transmits to said base station a notification reception confirmation signal of the change instruction.

7. A system according to claim 6, wherein said packet control signal generation section uses an existing signal as the notification reception confirmation signal.

8. A system according to claim 7, wherein said packet control signal generation section uses a channel quality indication representing a reception quality of a

downlink channel as the notification reception confirmation signal.

9. A system according to claim 6, wherein said base station further comprises a packet transmission control section which stops transmitting the packet to said mobile station when no notification reception confirmation signal can be received.

10. A system according to claim 6, wherein said packet control signal generation section notifies said base station of the channel quality indication immediately before receiving the transmission/reception state update information.

11. A system according to claim 1, wherein said base station further comprises a priority determination section which preferentially selects a mobile station having a high channel quality and notifies the mobile station of a change instruction to the active state.

12. A system according to claim 1, wherein said mobile station transmitting/receiving section starts one of transmission of a dedicated physical channel and reception of the dedicated physical channel on the basis of the setting information continuously held when said mobile station changes from the suspend state to the

active state.

13. A system according to claim 1, wherein said base station state updating section transmits the transmission/reception state update information at a timing known in advance.

14. A mobile station which sets a radio channel to a base station and receives a packet transmitted from said base station by using the radio channel, comprising:

a mobile station transmitting/receiving section which sets the radio channel to the base station;

a mobile station state updating section which sets, in accordance with transmission/reception state update information that is transmitted from the base station and indicates update of a packet receivable state, one of an active state in which the packet can be received and a suspend state in which the packet cannot be received; and

a mobile station information storage section which continuously holds dedicated physical channel setting information in the radio channel in the suspend state.

15. A station according to claim 14, further

comprising

a mobile station user data separation section which separates a reception signal from said mobile station transmitting/receiving section into user information and control information,

a reception quality measuring section which measures a reception quality of a CPICH from said mobile station transmitting/receiving section,

a packet reception determination section which determines, on the basis of the control information from said mobile station user data separation section, one of presence/absence of the control information of an HS-SCCH and presence/absence of normal reception of the packet from the base station, and

a packet control signal generation section which, when a change instruction to the active state is normally received, transmits a notification reception confirmation signal of the change instruction to the base station, and

a signal synthesizing section which synthesizes a notification reception confirmation signal and an external signal and transmits a DPCH (UL) and an HS-DPCCH.

16. A station according to claim 15, wherein said mobile station user data separation section comprises

a mobile station ID determination section

which detects a mobile station ID information contained in the HS-SCCH and determines whether the mobile station ID information coincides with a mobile station ID of said mobile station, and

a DL data determination section which determines presence/absence of transmission of the dedicated physical channel data (DL).

17. A base station which sets a radio channel to a mobile station and transmits a packet to the mobile station by using the radio channel, comprising:

a base station transmitting/receiving section which sets the radio channel to the mobile station;

a base station state updating section which notifies the mobile station of transmission/reception state update information that indicates update of a packet receivable state and sets the mobile station in one of an active state in which the packet can be received and a suspend state in which the packet cannot be received; and

a base station information storage section which continuously holds dedicated physical channel setting information in the radio channel in the suspend state.

18. A station according to claim 17, further comprising

a base station user data separation section which separates a reception signal from said base station transmitting/receiving section into user information and control information,

a buffer which stores the user information,

a packet transmission control section which executes transmission control of the packet on the basis of the control information from said base station user data separation section and mobile station information from said base station state updating section, and

a signal synthesizing section which synthesizes the user information from said buffer and a state update information signal from said base station state updating section.

19. A station according to claim 18, wherein

said packet transmission control section comprises a scheduling/transmission mode deciding section which decides a scheduling/transmission mode, and

said base station user data separation section comprises a UL data determination section which determines presence/absence of transmission of the dedicated physical channel data (UL).

20. A packet communication method for a mobile communication system in which a radio channel is set

between a base station and a mobile station, and a packet is transmitted from the base station to the mobile station by using the radio channel, comprising the steps of:

causing the base station to notify the mobile station of transmission/reception state update information that indicates update of a packet receivable state in the mobile station;

setting, on the basis of the transmitted transmission/reception state update information, one of an active state in which the mobile station can receive the packet and a suspend state in which the mobile station cannot receive the packet; and

causing the base station and the mobile station to continuously hold dedicated physical channel setting information in the radio channel in the suspend state.